ENVIRONMENT AND NATURAL RESOURCES

DEPARTMENTAL OVERVIEW

MISSION

Environment and Natural Resources (ENR) works with all people and interested organizations to protect our environment by making sure our resources are used wisely and that people understand their part in keeping the environment healthy.

GOALS

1. The NWT's air, land, water, wildlife, and forests are protected.
2. The NWT's natural resources are used and developed wisely in accordance with the Sustainable Development Policy.
3. Knowledge is gained through cooperating and sharing information with other organizations and people interested in the environment.
4. The NWT's environment and natural resources are managed with the understanding that forests, wildlife, air, land and water are connected.

BUDGET (2008/9)

Compensation & Benefits	$26,304,000
Grants & Contributions	$1,671,000
Other O&M	$27,247,000
Amortization	$1,720,000
Infrastructure Investment (Capital)	$1,765,000

POSITIONS (2008/9)

Headquarters (HQ)	70 positions
Regional/Other Communities	122 positions
Seasonal	95 positions

KEY ACTIVITIES

- *Corporate Management*
- *Environment*
- *Forest Management*
- *Wildlife*

STRATEGIC ACTIONS

The Department will take the following actions in support of the government's strategic initiatives:

- *Protect Territorial Water (Managing This Land Initiative)*
- *Mitigate and Adapt to Climate Change Impacts (Managing This Land Initiative)*
- *Improve Environmental Monitoring Efforts (Managing This Land Initiative)*
- *Environmental Stewardship (Managing This Land Initiative)*
- *Maximize Benefits from Resource Development (Maximizing Opportunities Initiative)*
- *Address Factors that Impact the Cost of Goods (Reducing the Cost of Living Initiative)*

STRATEGIC ISSUES

The natural environment is constantly altered through natural forces and human actions. Community and industrial development, exploration, and the harvesting of fish and wildlife species continue to put pressure on the environment and future resources. So too do the effects of climate change. Human activity needs to be managed such that risks to environmental and human health are minimized and the environment can continue to provide well into the future.

People in the NWT look to ENR to address their priority interests in wildlife, forests and the environment. This role is reflected in ENR's mandate to:

- Promote and support the sustainable use and development of natural resources; and
- Protect, conserve and enhance the NWT environment for the social and economic benefit of all NWT residents.

Immediately in the coming years, ENR is challenged to work with the public and its multiple agencies to help clearly define a vision for the NWT environment as this effects our future. What must an NWT landscape look like to ensure public benefit? Then, what must be done to ensure effective process is in place to achieve such a vision?

In some cases ENR, on behalf of the GNWT, must lead, particularly where the federal government has specifically transferred some of its former responsibilities to the GNWT, such as with wildlife and its habitat, forests, and Commissioner's Land.

Leadership for ENR means ensuring that the right information is in the right place at the right time to make sure multiple agencies have the tools to do their jobs well. Research, monitoring, and effective use of traditional knowledge all help.

GNWT legislation provides authority to manage particular aspects of the environment, especially for wildlife and its habitat, forests, and environmental protection; and territorial parks. Outdated legislation is being updated to reflect a more integrated approach to environmental and natural resource management, reflective of the multiple roles emerging for new Aboriginal governments. In other cases, the GNWT contributes to evolving process under Federal legislation, such as the *Mackenzie Valley Resource Management Act* and, in the Inuvialuit Settlement Region, *Territorial Lands Act*, *Northwest Territories Waters Act* and *Canadian Environmental Assessment Act*.

Within the GNWT, renewed commitment to the Sustainable Development Policy and the Traditional Knowledge Policy will promote environmental and natural resource management instruments.

Key GNWT strategies and framework, such as on Climate Change, Energy, Water, Macroeconomics, Land Use all require multi-disciplinary interests to be reflected if a healthy NWT landscape is going to be maintained.

Strategically, in the period 2008-12, ENR will lead the GNWT and the NWT public to look at some hard issues, then define and take action towards some solutions. Overviews of specific action areas are captured in the following pages.

The Minister of Environment and Natural Resources is accountable to the Executive Council, and ultimately the NWT public, to ensure ENR fulfills its mandate. The Minister will track ENR priority actions through the 2008-12 Framework for Action. Every six months progress will be reported.

Managing the Impacts of Development

The GNWT's ability to effectively assess the impacts of development and mitigate resulting cumulative effects is based on the quality and quantity of information available. Baseline data gathered by ENR is used to compare the state of the environment before, during and after development has occurred. This ensures appropriate management actions are taken as environmental changes are detected. Because baseline data is required for resource management; land use planning; establishing protected areas; environmental impact assessment; and detecting environmental change, baseline surveys need to be completed for all areas of the NWT.

The Western NWT Biophysical Study collects information on the environment, forest resources and wildlife in the Mackenzie Valley. The ecological land classification system for the NWT categorizes land based on landscape, climate zones and vegetation. Effects on the landscape are measured through monitoring programs, such as the air quality monitoring program, while development is monitored for compliance with ENR's statutes and regulations. These programs, designed to accumulate baseline environmental information and monitor the effects of human activities and natural disturbances, permit ENR to manage the NWT environment in an efficient manner.

An overview of the NWT's environment can be found in ENR's "State of the Environment Report", designed to update NWT residents and decision-makers on the state of the environment, biodiversity and natural resources. In addition to this Report, the GNWT is working to implement and keep timely web and Geographic Information System (GIS)-based wildlife management, forest management and air quality information systems. These systems store, analyze and distribute information and make it easier to provide current data to the public, communities and industry.

Stewardship to Manage Resources and Protect the Environment

Conserving wildlife, forests and other natural resources is a major priority for the people of the NWT. ENR is developing several pieces of legislation to ensure these resources continue to meet the needs of residents today and tomorrow. The draft Species at Risk Act was tabled in June 2008, and was introduced to the Legislative Assembly in fall 2008. Building on the success of the collaborative process developed with Aboriginal governments for the Species at Risk Act, work will continue on developing a new Wildlife Act. A framework for creating new NWT forest policy and legislation is being developed. It is the first step in updating legislation and policy for forest resources based on current ecological concepts and approaches to sustainable forest management.

Consultation with relevant stakeholders and organizations allows ENR to determine the most appropriate way to manage human activities while protecting our wildlife and forest resources and avoiding contamination of the land, air and water. Several initiatives involving public and community consultation are planned or underway.

- Based on the success of the beverage container program, consultation has taken place on new waste reduction and recovery programs for the NWT.
- Work continues on the development of best management practices to guide the actions of industry and to provide advice to regulatory authorities in the prevention or mitigation of adverse impacts to the environment, wildlife and forest resources.

- Through the development of a Forest Renewal Strategy, ENR is exploring various means of ensuring that forests are renewed and sustainable management achieved. The

objective is to develop and implement more cost-effective approaches for forest renewal programs.

- To minimize risk and protect communities from wildfires, ENR is working on the development of community protection plans based on FireSmart principles and practices and fuel hazard assessments for areas in the wildland/urban interface. The plans will be integrated with Municipal and Community Affair's (MACA) community land use planning processes and will address fire response planning and training needs in communities.
- Bison/human conflicts and the need for management of diseased bison require the development of an NWT-wide comprehensive bison management strategy and herd plans.
- The NWT shares jurisdictional responsibility for the management of several wildlife populations, including barren-ground, mountain and woodland caribou. ENR is working with neighbouring jurisdictions to develop co-management agreements to ensure that human activities do not impact the health or productivity of these wildlife species.

Protecting NWT Waters

Residents of the NWT value clean water, healthy aquatic ecosystems and sufficient sources of clean water to supply their communities. ENR works cooperatively with other federal and regional authorities to manage water issues. This work focuses on issues of importance to NWT residents within the GNWT's mandates; healthy ecosystems to support the traditional economy; and, community public water supply sources. The public and its governments and agencies need reliable up-to-date information to manage NWT water resources effectively. Public education and improvements to GIS or information management systems are routinely undertaken.

One focus area for the GNWT is ensuring aquatic ecosystems stay healthy. NWT rivers, lakes and wetlands are the mainstay of NWT wildlife and replenish sources for community public water supplies. ENR's work with others will advance information available on aquatic ecosystems and establish a set of viable NWT indicators of aquatic health.

Sufficient long-term, cost-effective sources of public water supplies for communities are dependent on the watersheds in the vicinity of communities. "Managing Drinking Water in the NWT: A Preventative Framework and Strategy" frames drinking water quality actions within three pillars: Keeping NWT Water Clean; Making Water Clean; and Proving Water is Clean. To Keep NWT Water Clean, ENR focuses on actions that will allow risks to public water supplies to be accurately assessed and effective management actions to be taken within these watersheds. ENR continues to build a system that makes public water supply watershed maps available through interactive web-mapping with layers on water use and other factors that could affect the sources. This allows water resources management to be integrated with land use planning.

In spite of ongoing efforts within our borders, effective NWT water resources management must rely heavily on effective management actions taken in the upstream reaches of the Mackenzie River Basin (MRB). The MRB Transboundary Waters Master Agreement (Master Agreement), signed by the Governments of Canada, Saskatchewan, Alberta, British Columbia, Yukon and the NWT, purpose is to: establish common principles for the cooperative management of the Aquatic Ecosystem of the MRB; establish an administrative mechanism to facilitate application of these principles; and make provisions for Bilateral Water Management Agreements. The Yukon-NWT bilateral agreement is already in place. INAC and ENR, on behalf of the GNWT, represent NWT interests in the negotiation of these agreements. Current water management approaches view multilateral agreements for all players in a sub-basin or watershed as more effective than bilateral agreements.

During the next two years (early 2010), the priority for agreements is those watersheds that contain upstream energy development, in particular the Alberta oil sands industry and large hydroelectric projects in the southern NWT, Alberta or British Columbia.

Taking Action on Climate Change

Climate change remains a serious issue for the NWT. Energy management programs established under the NWT Greenhouse Gas (GHG) Strategy (2007) and the GNWT Energy Plan are directed towards reducing carbon emissions in the NWT. These programs include support for: the Arctic Energy Alliance; the Energy Efficiency Incentive Program; the EnerGuide for Houses Program; the Energy Conservation Program; and, the Alternative Energy Technologies Program.

To address impacts from climate change already occurring in the NWT, ENR began developing a Climate Change Adaptation Action Plan in consultation with stakeholders during the fall of 2007. ENR will also create a Climate Change Network to improve communication and coordination of climate change activities in the NWT. The Network will provide a mechanism for tracking and reporting on achievement of emission targets and will support efforts to address climate change impacts in the NWT.

Advancing Implementation of the Protected Areas Strategy (PAS)

In response to the increasing pace and scale of development in the North, NWT PAS partners developed the Mackenzie Valley Five-Year Action Plan to significantly enhance implementation of protected areas in the Mackenzie Valley. More than 16 million dollars has been committed by INAC, ENR and environmental non-government organizations to implement the Action Plan between 2005-06 and 2009-10. There are currently 13 communities involved in identifying and advancing 20 candidate areas through the PAS process. ENR continues to work with NWT PAS partners to advance the Strategy. In March 2007, the federal government announced a 10 million dollar investment to create or expand protected areas in the NWT during the following two years. In response to this announcement, ENR is reviewing key Action Plan areas and working with PAS partners to identify priorities for investment.

SUMMARY

While the NWT has an abundance of natural resources, our environment is facing pressures from industrial and community development, a changing climate and natural forces. Management actions taken collaboratively by a multitude of parties are needed to mitigate and control these pressures.

ENR will continue to work collaboratively with its management partners and the public to protect our environment while ensuring the wise and sustainable use of our resources.

CORPORATE MANAGEMENT

Description

The Corporate Management activity is carried out through the Directorate; Policy, Legislation and Communications; Corporate Shared Services (Finance and Administration and Informatics); and Compliance.

Divisions within this activity enable the Department to respond effectively to environmental and resource management issues of concern to the NWT residents. This activity promotes and undertakes: strategic planning; policy development; public education and information; compliance with environmental and renewable resource law; financial management and administration services; and geographic information system (GIS) and database system development and management so timely information is available to decision-makers and the public.

As well, corporate management coordinates Departmental input into negotiation of Aboriginal lands, resources and self-government agreements; federal land and water legislation reviews; land use planning; cumulative effects assessment and management; federal-provincial-territorial initiatives; and, negotiations for devolution of land and resources management with the federal government.

2008/09 Resources

Budget:

Compensation & Benefits	$5,752,000
Grants & Contributions	$70,000
Other O&M	$4,213,000
Amortization	$59,000

Staff (Positions):

Headquarters (HQ)	18
Regional/Other Communities	5

Major Program and Service Initiatives

Corporate Management leads or coordinates extensive internal, interdepartmental, intergovernmental, Aboriginal governments and public engagements required for successful land and resource management. Corporate management is strengthening land and resource GIS and databases to support multiple initiatives, and leads GNWT input into development, approval and review of regional land use plans, such as those for the Dehcho, Sahtu, Gwich'in and Upper Thelon regions.

Working with INAC and Aboriginal governments, Corporate Management is developing a NWT water resources management strategy. Corporate management coordinates GNWT input into numerous interjurisdictional water management initiatives such as the Canada Wide Strategy for the Management of Municipal Wastewater Effluent.

A field support unit is to be established for regional activities related to preparing public information and education, compliance, traditional knowledge, maintaining central databases on licencing and permitting and provide logistical support.

KEY ACTIVITY 1: ENVIRONMENT

Description

The Environment Division works with other departments, governments, industry and citizens to maintain a high quality environment for the benefit of current generations. The Environmental Protection section works to prevent, and reduce, the impact of human activities on the natural environment by providing information, advice and programs in the areas of contaminated sites, hazardous substances, solid and hazardous wastes and air quality. The Energy Management section coordinates the GNWT's response to climate change by developing strategies and activities to control, and inventory, greenhouse gas emissions, identify climate change impacts, increase awareness of climate change and adapt to a warming climate. Working in partnership with the Arctic Energy Alliance, this section encourages energy conservation and the use of energy efficient technologies and alternative energy sources. The Environmental Assessment and Monitoring Unit coordinates Departmental input into preliminary screenings of regulatory applications and renewal of permits and licences as well as the GNWT's participation in environmental assessments and environmental impact reviews.

Major Program and Service Initiatives

A number of program changes and enhancements will be implemented in the Environment Division. Expertise on water issues has been added to allow the Department to better represent the GNWT's interest in water protection and management issues. The waste reduction and recovery and air quality monitoring programs will be expanded. The remediation plan for Giant Mine will undergo an environmental assessment and ENR will work with the federal government to address this environmental liability.

There will be an increased focus on climate change issues through adaptation planning, implementation of the Greenhouse Gas Strategy, action on energy priorities and support for NWT residents, business and communities to take action on reducing greenhouse gas emissions and energy costs.

The Environmental Assessment and Monitoring unit has been moved to Environment. It will implement programs to streamline GNWT participation in environmental assessment and improve the effectiveness of GNWT submissions to regulatory and environmental assessment processes.

2008/09 Budget:

Compensation & Benefits
$3,367,000

Grants & Contributions
$1,270,000

Other O&M
$938,000

Amortization
None

Staff (Positions)

26 HQ
9 Regional/Other

Measures:

1- Annual recovery rate of beverage containers.

2 - Number and volume of hydrocarbon spills reported.

3 – Quantity of hazardous wastes generated and transported off site.

4 – Level of participation in energy conservation and alternative technology programs.

5 – Number of regulatory applications, renewals and environmental assessments handled.

6 – Annual inventory of total NWT GHG emissions.

KEY ACTIVITY 2: FOREST MANAGEMENT

Description

The Forest Management Division provides for the stewardship of NWT forests through sustainable management of forest resources and forest fire management.

Sustainable forest management is ensured through the collection of information on the state of forest resources; forest management planning; monitoring of forest health and changes to forest landscapes; regulation of forest practices and planning; and compliance and reporting. Forest fire management is achieved through prevention, preparedness and forest fire response. Using the best science, technology and effective use of available fire response resources, forest fire management provides for the protection of people, property and other values at risk from forest fire. Developing an increased capacity of individuals, communities, industry and others to take responsibility for reducing fire hazards and forest fires is also a priority.

Major Program and Service Initiatives

Changes within the forest management program include a shift to a more integrated approach to the collection of data on the status of forest resources. New approaches will focus on more cost effective ways to provide information needed by governments, industry and the public for decision-making. Products created will provide information for classifying vegetation for wildlife habitat, fuel typing for fire management, carbon modeling related to climate change and assessing the impact of the loss of vegetation as a result of industrial development, especially related to oil and gas.

In the fire management program, a new program delivery approach will be implemented with a focus on redeveloping capacity. This will include establishing a core of well-trained personnel with the support needed to ensure safety and liability issues are considered. Risk mitigation will be a priority with community protection initiatives that focus on identifying ways to mitigate the risk of wildland fire to communities in a proactive manner. More collaborative approaches to working with communities on the management of forest resources and the protection of values that may become at risk from wildland fire will also be emphasised.

2008/09 Budget:

Compensation & Benefits
$8,733,000

Grants & Contributions
$100,000

Other O&M
$16,338,000

Amortization
$1,365,000

Staff (Positions):

0 HQ
47 Regional/Other
95 Seasonal (all locations)

Measures:

1 - Area of the NWT having data on the current state of the forest resource.

2 - The volume of timber harvested does not exceed sustainable harvest limits.

3 - Number of community wildland fire risk mitigation plans completed.

4 - Number of person caused fires and fire that results from industrial activity.

KEY ACTIVITY 3: WILDLIFE

Description

Wildlife initiatives assess and monitor wildlife, habitat, species at risk, wildlife health and biodiversity as well as coordinate initiatives to address impacts on wildlife from human activity. Functions include developing plans and programs to support the sustainable use of wildlife resources, preparing public information materials on wildlife management and safety and administering the sport fishery.

Protected Areas provides a secretariat function to the NWT Protected Areas Strategy (PAS) in partnership with Indian and Northern Affairs Canada and Aboriginal, environmental and industry organizations.

Major Program and Service Initiatives

Addressing wood bison management issues through the release of an NWT Wood Bison Management Strategy and development of herd specific management plans with communities is a key initiative.

Prepare a new five-year Caribou Management Strategy 2010-2015 based on surveys conducted in 2009 to update herd estimates.

Regional offices are increasing patrols and public education programs for caribou management in response to public requests. Traditional knowledge studies to improve information on caribou and to promote respect for wildlife are being supported.

Recovery strategies and plans for species at risk, such as wood bison, Peary caribou, woodland caribou and polar bear, will be completed with partners who share responsibility for managing these wildlife species.

A new key initiative under the NWT Protected Areas Strategy is to use territorial legislation to protect special natural and cultural sites identified by communities.

2008/09 Budget

Compensation & Benefits
$8,452,000

Grants & Contributions
$231,000

Other O&M
$5,758,000

Amortization
$296,000

Staff (Positions)

26 HQ
61 Regional/Other
0 Seasonal

Measures:

1 – Report on state of environment.

2 – Management agreements on shared wildlife populations.

3 – Reports on wildlife studies.

STRATEGIC INITIATIVE: MANAGING THIS LAND

Action: Protect Territorial Water

Description

Residents of the NWT value clean waters and healthy aquatic ecosystems. Communities need sufficient sources of water to satisfy current and future needs. ENR works cooperatively with other GNWT departments and water resources managers, including the federal government and land and water boards. Water use in neighbouring jurisdictions requires specific attention as the NWT is downstream within the Mackenzie River Basin (MRB).

One key obligation for water resources management in the NWT is the MRB Master Agreement, which states the ecological integrity of the MRB must be maintained. To be effective, the public and agencies must be informed about water quality, quantity and aquatic ecosystems. The MRB Board, workshops and Aboriginal water gatherings assist in keeping all parties informed.

To ensure NWT waters are protected in a meaningful way, ENR, in collaboration with INAC, is leading the development of a NWT water resources management strategy. The strategy will identify sound principles, NWT interests and priorities and serve as a foundation for water resources management initiatives, such as future agreements and risk management strategies, like the Canada-wide Strategy (CWS) for Municipal Wastewater Effluent. Traditions, culture and economics help shape future actions. Public engagement to develop and implement management instruments is crucial.

Objectives

Objective 1 - Develop management tools to assist water managers, including communities, to effectively protect community public water supply zones. Actions to support this objective include community visits to explain public water supply watershed mapping and receive insight into regional risks and concerns.

Objective 2 - Develop a viable process to define aquatic ecosystem indicators that underscore the importance of identified water resource values. Indicators will be developed through research, validation and by NWT public engagement. Such indicators will inform a NWT water resources management strategy and bilateral negotiations.

Objective 3 - Develop a comprehensive NWT Water Resources Management Strategy that will set the mandate for negotiating transboundary water resource agreements with upstream jurisdictions in the Mackenzie River Basin (MRB). Continue to participate in MRB Board activities including developing a hydrological model of the basin; producing a State of the Basin Report; Traditional Knowledge collection and use; and, communicating transboundary water management issues to Basin residents, Ministers and others.

Objective 4 - Develop a NWT implementation plan for the Canada-wide Strategy for the Management of Municipal Wastewater Effluent (MWWE) in a manner that improves human health and environmental protection and harmonizes regulatory approaches. Identifying funding and incorporating Northern Research Working Group findings will be critical to implementing appropriate solutions for the North.

Action Plan

Identify NWT public water resources needs and interests through literature review before developing a conceptual preliminary risk management model related primarily to community water sources and NWT aquatic ecosystems. Identify issues of water quality, quantity, ecological integrity, and water resources use as per transboundary waters and comprehensive claims agreements. Complete gathering of technical information and initiate negotiations on a NWT-Alberta (AB) bilateral agreement. Host a biannual meeting on Yukon-NWT bilateral agreement. (Summer-fall 2008)

Engage public to develop a values-based NWT Water Resources Management Strategy that includes risk-based management instruments acknowledging supply and demand of water resources. The public will contribute local and traditional knowledge; validate research findings and approach; and, identify priorities for use, protection and conservation of NWT water resources. This strategy will serve as a foundation for bilateral negotiations and other water management initiatives. (2008-2009)

Healthy aquatic ecosystems are a mainstay of the NWT traditional economy and a necessity for moose, fish and aquatic furbearers. The aquatic ecosystems of the MRB are also important in global ecological integrity as the MRB is a major contributor to Arctic waters. Various agencies have responsibility for aquatic ecosystem monitoring within the MRB, including INAC and Environment Canada. ENR will work with others to advance the availability of information on aquatic ecosystems and develop appropriate NWT indicators. (2009-10)

Finalize the NWT Water Resources Management Strategy and identify implementation actions, roles and timeline. Complete NWT approval process for Canada Wide Strategy for the Management of Municipal Wastewater Effluent (CWS for MWWE); continue participation in national committee and northern research working group; and initiate implementation discussions. Continue negotiations on a NWT-AB bilateral agreement. (2009-2010)

Finalize negotiations and undertake approval process for NWT-AB bilateral agreement; initiate discussions towards other bilateral agreements (Saskatchewan, British Columbia); and continue to implement Yukon-NWT bilateral. Ongoing participation in MRB management processes, including releasing the 2009 State of the Aquatic Ecosystem report. Ongoing implementation of NWT Water Resources Management Strategy based on priorities identified through consultation as well as water resources risk analysis and GNWT focus on source protection of community public water supplies and aquatic ecosystem integrity. Develop implementation plan and proceed as appropriate for the CWS for MWWE. (2010-11)

Continue to implement NWT Water Strategy based on priorities and GNWT public interests as identified. (2011-12)

STRATEGIC INITIATIVE: MANAGING THIS LAND
Action: Mitigate & Adapt to Climate Change Impacts

Description

This strategic action focuses on enhancing the GNWT's efforts on climate change through: improved planning and coordination; continued delivery of the Greenhouse Gas Strategy and Energy Plan; and specific activities to adapt to impacts of climate change. Action will be taken to reduce greenhouse gas emissions, track emissions and energy performance and to investigate and support alternative energy technologies. ENR and partners on the NWT Wind Energy Committee will undertake the development of a detailed business case and community consultations for two wind energy electricity supply pilot installations in the NWT; conduct geotechnical/engineering studies for the initial installations; and install wind turbines. ENR will promote the use of alternative energy sources in the NWT and will prepare and implement a NWT Climate Change Adaptation Plan. The Plan will establish mechanisms to provide information and support to decision makers at all levels to incorporate climate change considerations into their activities.

Objectives

Objective 1 - Increase awareness of global climate change, the need to reduce emissions and the need to adapt to the consequences of climate change.

Objective 2 - Implement achievable and practical actions to reduce current and future greenhouse gas emissions.

Objective 3 - Ensure governments, industry and residents have the information and plans necessary to consider impacts of climate change in their ongoing activities.

Action Plan

A number of specific actions are included under this strategic action.

Prepare a Climate Change Adaptation Action Plan in collaboration with other GNWT Departments, communities and Aboriginal organizations (Fall 2009).

Implement the NWT Climate Change Adaptation Action Plan. This includes developing initial regional climate change scenarios in association with Environment Canada, issuing contracts to conduct geophysical permafrost surveys and working with other GNWT departments, communities and regional governments who are addressing adaptation problems (Fall 2009 and ongoing).

Continue to refine climate scenarios; interpret permafrost mapping information; identify permafrost vulnerabilities arising from future climate warming; conduct risk assessments; and, support affected departments, communities and regional governments to adapt to climate change (Spring 2010 and ongoing).

Establish a Climate Change Network to provide necessary communication and coordination support to organizations involved in greenhouse gas mitigation and climate change adaptation (Winter 2009). Prepare, and start to implement, a Biomass Strategy that identifies actions, programs and projects necessary to establish a sustainable biomass energy market and supply chain in the NWT.

Prepare business models and undertake geotechnical/engineering studies for the installation of wind energy electrical supply in Tuktoyaktuk (Spring 2009).

Install wind turbines in Tuktoyaktuk, assess the project and develop business plans and geotechnical / engineering studies for additional wind turbine installations (2010-2012).

Inventory GNWT greenhouse gas emissions; support other parties in the NWT in preparation of their greenhouse gas emission inventories; and prepare annual inventories of total NWT emissions for reporting to The Climate Registry (Spring 2009 and ongoing).

Provide funding and technical support to projects demonstrating the use of alternative energy technologies (eg. solar hot water heating, photovoltaic panels, wood pellet heating) and develop GNWT and community knowledge and capacity (Fall 2008 – ongoing).

STRATEGIC INITIATIVE: MANAGING THIS LAND
Action: Improve Environmental Monitoring Efforts

Description

To effectively manage the land and work with partners on environmental issues, it is important appropriate information is collected and shared to support informed decisions. This action will advance the availability of environmental information and associated monitoring and reporting systems.

Ecoregion mapping provides a current picture of the land, which can be used to assess potential environmental impacts of development and monitor impacts from climate change. The approach to mapping the eco-regions of the NWT is forward-looking and provides a basic reference point for detecting vegetation and landscape changes, environmental assessment and resource management.

The Western NWT Biophysical Study was established in 2003 to help ensure baseline data necessary to assess, mitigate and monitor the environmental impacts of proposed developments in the Western NWT is available to industry, regulators, communities and governments. The program focuses on areas within the mandate of ENR - wildlife, wildlife habitat, forests and air quality. Partnership funds provide half of the resources used for the research projects.

Objectives

Objective 1 - Complete ecoregion classification for Taiga Shield and Cordilleran Ecozones in 2008-09 and, in future years, for Southern and Northern Arctic Ecozones. (Ecoregion Mapping)

Objective 2 - Complete the collection and compilation of baseline information for wildlife, wildlife habitats, forests and air quality to support resource management decisions in the Western NWT. (Western NWT Biophysical Study)

Action Plan

<u>Ecoregion mapping</u>

Taiga/Shield Ecozone

- Publish technical report in June 2008
- Complete layperson poster and ENR publication by March 2009

Taiga/Boreal Cordillera Ecozone

- Publish technical report in June 2009
- Complete layperson poster and ENR publication by March 2010

Southern Arctic Ecozone

- Surveys and field assessment summer 2009
- Publish technical report and maps by March 2010
- Layperson poster and ENR publication completed by March 2011

Northern Arctic Ecozone

- Surveys and field assessment summers 2009 and 2010
- Publish technical report and maps by March 2011
- Layperson poster and ENR publication completed by March 2012

Western NWT Biophysical Study

- Conduct boreal caribou studies in Dehcho, Sahtu and Inuvik regions to monitor productivity and habitat use and assess cumulative impacts
- Hold regional wildlife workshop (Dehcho 2008, Sahtu 2009, Dehcho 2010, Sahtu 2011)
- Monitor grizzly bear productivity and habitat use in Mackenzie Delta petroleum exploration areas
- Monitor forest plots for growth and yield
- Monitor air quality in selected communities
- Prepare annual report on studies

STRATEGIC INITIATIVE: MANAGING THIS LAND
Action: Environmental Stewardship

Description

The careful and responsible management of our natural resources and the environment is of critical importance to the people of the Northwest Territories. This strategic action will advance legislation, policies, plans and programs to support the stewardship and sustainable use of the environment and its natural resources. Wildlife populations and habitat will be monitored, the Caribou Management Strategy (2006-2010) will be fully implemented and a new strategy prepared for 2011-2015. A Wood Bison Management Strategy and herd management plans will be prepared. The waste reduction and recovery program will expand to reduce our impact on the environment. New wildlife and species at risk legislation will be put in place for the protection and management of wildlife. A new NWT PAS Mackenzie Valley Five-Year Action Plan will be prepared. A field support unit will be established for regional activities related to preparing public education information, compliance, maintaining central databases on licencing and permitting and to provide logistical support. Reducing the risk to communities from wildland fire is being accomplished through advanced planning and adoption of FireSmart principles. The potential for communities to be threatened by wildfire will be assessed and risk management strategies to mitigate risk identified in community protection plans.

Objectives

Objective 1 - Prepare management strategies, plans and agreements needed for barren-ground caribou and species at risk (polar bear, woodland caribou, wood bison). (Stewardship)

Objective 2 - Complete NWT Species at Risk Act and draft NWT Wildlife Act. (New Legislation)

Objective 3 - Implement achievable and practical actions to reduce the amount and types of wastes entering landfills and potentially the northern environment.

Objective 4 - Protect special natural and cultural areas and representative areas of eco-regions. (NWT Protected Areas Strategy)

Objective 5 - Establish a Field Support Unit from existing resources and staff. (Compliance, Education and Enforcement)

Objective 6 - Mitigate the risk to communities from wildland fire through the development and implementation of community protection plans that identify risk management strategies.

Action Plan

Stewardship

- Release Ten Year NWT Wood Bison Management Strategy (Fall 2008)
- Release NWT Boreal Caribou Action Plan (Fall 2008)
- Release State of the Environment Report (Fall 2008)

- Update population estimates of Cape Bathurst, Bluenose-East, Bluenose-West and Bathurst caribou herds (Summer 2009)
- Complete polar bear and barren-ground caribou inter-jurisdictional management agreements (Summer 2009)
- Release herd specific management plans (wood bison and barren-ground caribou) (2010)
- Release new NWT Barren-ground Caribou Strategy (2010-2015) (Spring 2010)
- Release General Status Report on NWT Species 2010 (Fall 2010)
- Release annual report on wildlife disease and contaminants
- Release annual report on implementation of barren-ground caribou strategy
- Complete community protection plans that contain risk management strategies for communities across the NWT.

New Legislation

- Release consultation document and draft species at risk legislation (Summer 2008)
- Introduce species at risk legislation (Fall 2008)
- Bring species at risk legislation into force (2010)
- Release draft wildlife legislation (2011)

Expand existing waste recovery program

Waste recovery and recycling reduces our use of raw materials, saves landfill space, reduces emissions of greenhouse gases and other pollutants and provides local business opportunities. Building on the success of the Beverage Container Program, ENR has obtained input from the public on additional waste types that could be recovered across the NWT to expand the program. Feasibility studies, regulation amendments and public awareness programs will be conducted in 2008/09. Phased expansion of the program will begin in 2009/2010.

NWT Protected Areas Strategy

- Release map of important wildlife areas (Fall 2008)
- Prepare new Five-Year Action Plan (Summer 2009)
- Continue to support areas moving through eight-step process.

Compliance, Education and Enforcement

- Establish new Field Support Unit (Fall 2008)

Develop Risk Management Strategies and community protection plans for NWT Communities

- Prepare plans for 12 communities (2011)

STRATEGIC INITIATIVE: MAXIMIZING OPPORTUNITIES

Action: Maximize Benefits from Resource Development

Description

Work will be required from all GNWT departments to support development of the Mackenzie Gas Project (MGP) pending its approval. The GNWT supports development that proceeds at a pace and manner that respects the environment and ensures benefits accrue to NWT residents. This development has the potential to be the single most significant economic development opportunity in the history of the NWT.

ENR will ensure that technical expertise is available to effectively handle the workload associated with the MGP regulatory review and approval processes. The Oil and Gas Regulatory Officer will help to ensure a timely and thorough review of the pipeline applications; support mitigation and remediation activities; address public concerns over potential environmental impacts from pipeline and natural gas development; and, reduce the GNWT's post-devolution environmental liabilities.

The MGP will cause the single largest act of land clearing in the history of the NWT with an expected area to total upwards of 14,000 hectares. The Environmental Impact Analyst position in the Forest Management Program will coordinate the many inter-related aspects of this activity with the developer and the many regulators and stakeholders.

Objectives

Objective 1: To effectively participate in the regulatory review of the estimated 6,900 applications for water licenses, land use and quarry permits required for pipeline construction and thereby helping to minimize GNWT and community environmental liabilities and preserve the quality of existing air, land and water resources.

Action Plan

Undertake preparations to ensure technical staff are fully aware of technical issues relating to the MGP and are prepared to conduct a comprehensive, coordinated review of applications in a timely fashion (Fall/Winter 2008).

Recruit additional expertise in the areas of oil and gas regulation and forest impacts to ensure timely and effective participation in MGP regulatory review and planning processes (2009 to 2012).

Undertake reviews and submit recommendations to the appropriate regulatory authorities as applications are received (2008 to 2012).

STRATEGIC INITIATIVE: REDUCING THE COST OF LIVING

Action: Address Factors that Impact the Cost of Goods

Description

This strategic action focuses on efforts to reduce the consumption of costly energy sources through programs identified in the NWT Greenhouse Gas Strategy and the Energy Plan including EnerGuide for Houses, Energy Efficiency Incentive Program, Energy Information and Awareness and the Arctic Energy Alliance.

Objectives

Objective 1- Reduce consumption of greenhouse gas emitting energy sources and thereby reduce energy costs and protect residents from increasing costs of imported fuels.

Action Plan

Provide support for Arctic Energy Alliance activities and programs. The Alliance is a not-for-profit organization established in 1997 to assist communities, governments, business and consumers to reduce the costs and environmental impacts of their energy and utility services. It has become the public's primary clearinghouse for energy conservation and efficiency programs in the NWT. Additional support will be provided to the Alliance to enhance administrative support and increase the capacity of the staff to work in communities (Summer 2008 - ongoing).

Provide support to NWT residents, businesses and communities to increase energy conservation and efficiency. Energy conservation and efficiency programs established under the Greenhouse Gas Strategy and Energy Plan (EnerGuide for Houses, Energy Efficiency Incentive Program, Energy Conservation Program and the Commercial Energy Audit Program) will continue and will be enhanced as necessary to address demand for the programs (Summer 2008 – ongoing).

Conduct public awareness and education programs. An individual energy consumer's behaviour is the most critical factor to reducing energy use and greenhouse gas emissions. Energy awareness and education helps ensure NWT residents know the opportunities available to reduce energy consumption and greenhouse gas emissions, and save money. Efforts in public information, marketing campaigns, and technical energy information on emerging technologies will be enhanced for communities and residents (Summer 2008 - ongoing).

INFRASTRUCTURE INVESTMENTS ($1,765,000 for 2008/09)

A primary focus of infrastructure investments is to ensure the health and safety of staff at regional facilities, related to both special purpose space and general office space. Requirements include both life cycle replacement of buildings and major renovations.

Infrastructure investments are also required to address environmental liability issues; to ensure that the ability of the GNWT to deliver an effective fire management program is maintained and that new technology is available to facilitate management of resources and protection of the environment.

Standards for the storage of aviation fuel now require that berms to constructed for containment to mitigate potential risks associated with spills. The replacement of existing fire tower infrastructure is a significant safety issue, as many towers no longer meeting national standards. The current lightning sensor network, critical to the detection of fire in the NWT, requires upgrading. The existing communication network supporting field operations is aging and much of the network requires upgrading. New technology is also emerging that could enhance the ability of the network to support Departmental operations.

The development of information technology projects is essential to the ability of ENR to manage a fire response program over a landbase as large as the NWT. Similarly technology is needed to support environmental assessment processes and regulatory processes.

The plan will consider regional operations complexes, community operations requirements, environmental liability risk mitigation, forest fire management infrastructure, and development of standards for infrastructure needs.

The strategic assessment will be complete in Fiscal year 2009-2010, with the planning phase undertaken shortly thereafter.

The priority areas for infrastructure planning for the period 2008/2009 to 2011/2012 will ensure regional complexes meet operational requirements; problems related to mitigation of environmental liabilities are addressed; and, upgrading of the lookout tower network to ensure that facilities meet safety requirements. A proposal will also be developed for updating of the Department's communication network supporting field operations.

LEGISLATIVE INITIATIVES

ENR has three legislative initiatives planned during the next four years - Species at Risk Act, Wildlife Act and Forest Legislation.

Species at Risk

In 2003, the GNWT signed the *Accord for the Protection of Species at Risk* (the Accord), which commits federal, provincial and territorial governments to a national approach to protect species at risk. Through the Accord, all Canadian jurisdictions agreed to establish legislation and programs to provide a seamless web of protection for species at risk throughout Canada. To meet the GNWT's obligations under the Accord, ENR is developing a Species at Risk Act (SARA) to protect and recover species at risk in the NWT.

SARA will establish a process to determine which NWT species are at risk; how the species and its habitat should be protected and conserved; and, how to help each species recover. It will apply to all native wild species in the NWT (plants, invertebrates, animals), on both public and private lands, and will provide the Minister with the ability to make regulations to protect both species at risk and their habitat.

Wildlife Act

The *Wildlife Act* is the GNWT's main tool for protecting and managing wildlife. The current *Wildlife Act* was enacted in 1979. No major amendments have been made to the *Act* since its implementation almost 30 years ago. Consequently, the *Act* is widely seen to be outdated. As a pre-Charter statute, some provisions of the *Act* do not reflect the provisions of the *Charter of Rights and Freedoms*.

The purpose of the new Wildlife Act is to reform wildlife management law by enacting legislation that is comprehensive, enforceable and respectful of Aboriginal and treaty harvesting rights. The new Wildlife Act will build on results from previous consultations and provide the GNWT with tools to effectively manage and protect wildlife populations and their habitat. It will also address new requirements necessary to ensure consistency with federal legislation, the *Charter*, settlement of LCAs and court decisions relating to Aboriginal harvesting rights. The fundamental principle underlying the legislation will be the conservation of wildlife.

Forest Legislation

New legislation is needed if the GNWT is to have regulatory approaches to address current and future forest management needs. The existing *Forest Protection Act* and *Forest Management Act* do not provide the tools necessary to manage forest resources consistent with sustainable forest management, the NWT Sustainable Development Policy, and current forest management principles. None of the legislation adequately addresses consultation with Aboriginal governments and organizations.

The *Forest Management Act* was created in 1988, immediately after the transfer of responsibility from the federal Government to the GNWT. The *Forest Management Act* is prescriptive in nature and does not provide guidance about how forests should be managed. There is no formal Forest Management Policy.

ENR has initiated development of new comprehensive legislation that supports sustainable forest management and an approach to fire management consistent with the NWT Forest Fire Management Policy. The proposed legislation will cover the management of forest vegetation, regulatory requirements for the sustainable use of forest resources, and the protection of people, property, and values at risk from wildland fire in the NWT.